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CHEMICAL CORPORATION

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05 May 2005

VIA CERTIFIED MAIL
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Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460-0001

Attention: TSCA Section 8(e) Coordinator

RE: Submission on Dibromostyrene (DBS) Study; CAS No.: 125904-11-2. Results of "A 96-Hour Toxicity Test with the Freshwater Alga (*Selenastrum capricornutum*)" using OECD 201 and OPPTS 850.5400 Guidelines.
(When responding, please refer to JAB-05-019).

Dear Sir:

Great Lakes Chemical Corporation (GLCC) submits this letter of substantial risk notification in accordance with Section 8(e) of the Toxic Substances Control Act, 15 USC 2607(e), and the Environmental Protection Agency's "Statement of Interpretation and Enforcement Policy" thereof 43 FR 1110, 35 seq., March 16,1978. The notification is in regards to a final report received from the performing laboratory on April 29, 2005.

The species of algae used for this study was exposed to a negative control (dilution water), or a geometric series of five test concentrations of the test material. The nominal test concentrations selected were 0.63, 1.3, 2.5, 5.0, and 10 mg/L. At test initiation an inoculum of algal cells was added to each test chamber to achieve approximately 10,000 cells/mL. Measured test concentrations were determined from each treatment and the control group at 0 and 96 hours, but the 96-hour measured values were less than the limit of quantitation (LOQ), which was 0.200 mg/L. Thus, the LC_{50} values reported are based on nominal concentrations.

Toxicity to the algae was determined by evaluating changes in the cell density over the 96-hour exposure period, which were used to calculate areas under the growth curve and growth rates. Under the conditions in which this study was run, the calculated 24, 48, 72, and 96-hour EC_{50} values for cell density are >10, 6.7, 6.2 and 7.3 mg/L, respectively. Regarding area under the curve (biomass), the calculated E_bC_{50} values are >10, 6.3, 6.1, and 6.9 mg/L, respectively. Growth rate E_rC_{50} values are >10, 7.1, 9.1, and >10 mg/L, respectively. The 72-hour NOAECs for cell density, biomass and growth rate are reported to be 0.63, 0.63 and 2.5 mg/L, respectively. The 96-hour NOAECs for cell density, biomass and growth rate are reported to be 2.5, 2.5 and 5.0 mg/L, respectively.

Sincerely,

John A. Biesemeier
Manager, Regulatory Toxicology
Regulatory Affairs

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Responsible Care
Good Chemistry at Work

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